

IN THE SPECIFICATION

Please replace paragraph [0037] with the following amended paragraph.

[0037] The magnetization of target 30 follows a magnetization curve, or BH curve. For example, when target 30 is magnetized due to a sixty Hertz alternating magnetic field, the magnetization of target 30 may be traced around the BH curve sixty times per second. The permeability of target 30 follows a tangent of the BH curve. Therefore, as target 30 becomes more magnetized the permeability of target 30 decreases. This decrease in the permeability of target 30 appears as a shift in normalized ~~impedance curve 300~~ impedance curve 302. For example, a first line of constant gap 312 may be superimposed on graph 300. When transducer 12 is held at a constant gap from target 30 and the magnetic field of target 30 is varied, the normalized impedance of transducer 12 may be plotted as points that define a lift-off line 314 along line 312. Additionally, the time rate of change of the position of a point along line 312 may be correlated to the strength and time rate of change of the target magnetic field.